

FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TOTAL SHEETS
3	MD.	STPG-218-1(7)E	22	66

44 SF 813 FLAT SHEET ALUMINUM SIGNS CONSISTING OF:
 - 1 EACH R6-1L (36" X 12")-POLE MOUNT
 - 1 EACH R6-1R (36" X 12")-POLE MOUNT
 - 1 EACH R6-1L (36" X 12")-GROUND MOUNT
 - 1 EACH R6-1R (36" X 12")-GROUND MOUNT
 - 2 EACH D3-2 (Washington Ave)
 (VAR." X 16")-MAST ARM MOUNT
 - 1 EACH D3-2 (West Side Ave)
 (VAR." X 16")-MAST ARM MOUNT

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
3	CY	205	TEST PIT EXCAVATION
8	CY	206	REMOVAL OF EXISTING SIDEWALK
90	LF	SP 555	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
70	LF	SP	REMOVE EXISTING PAVEMENT MARKINGS- ANY WIDTH
600	SF	610	4 INCH CONCRETE SIDEWALK
1	EA	816	INSTALL CONTROLLER AND CABINET- BASE MOUNT
38	SF	813	INSTALL OVERHEAD SIGN
6	SF	813	INSTALL GROUND MOUNTED SIGN
40	LF	812	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 4 INCH
5	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 3 SECTION (R, Y, G) SIGNAL HEAD HAVING PROPER ADJUSTABLE MAST ARM BRACKET, AND TUNNEL VISORS-PAINTED BLACK
1	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 4 SECTION (R, Y, G, GA) SIGNAL HEAD HAVING PROPER ADJUSTABLE MAST ARM BRACKET, AND TUNNEL VISORS-PAINTED BLACK
3	EA	SP	FURNISH AND INSTALL OPTICOM DETECTOR EYE- MODEL 521
3	EA	811	FURNISH AND INSTALL ELECTRICAL HANDHOLE
9	CY	801	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
40	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-RISER
75	LF	805	FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
20	LF	805	FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED
90	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
1	EA	807	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
3	EA	SP	FURNISH AND INSTALL 21-FOOT STEEL POLE WITH A SINGLE 38-FOOT MAST ARM- PAINTED GREEN
2	EA	SP	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE
1	EA	SP	AS-BUILT FOR TRAFFIC SIGNAL
3	EA	804	FURNISH AND INSTALL GROUND ROD-3/4 INCH DIAMETER X 10-FOOT LENGTH
180	LF	810	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
175	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE- 1 CONDUCTOR (NO. 4 AWG - THHN/THWN)
325	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE- 5 CONDUCTOR (NO 14 AWG)
200	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE- 7 CONDUCTOR (NO 14 AWG)
500	LF	810	FURNISH AND INSTALL OPTICOM M-138 DETECTOR CABLE
3	EA	SP	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
1	LS	SP	DELIVERY OF SALVAGED EQUIPMENT
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
1	LS	SP	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED

NOTE: ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT
 NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
2	EA	MAST ARM POLE
1	EA	CONTROLLER AND CABINET
1	EA	PEDESTAL POLE AND BASE

NOTE: EXISTING RIGHT-OF-WAY BASED ON MDSHA PLAT NO. 14090.

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION LOG MI. 21E04035.22

DRAWN BY: M. GESELL
 DES. BY: J. LAWRENCE
 CHK. BY: _____

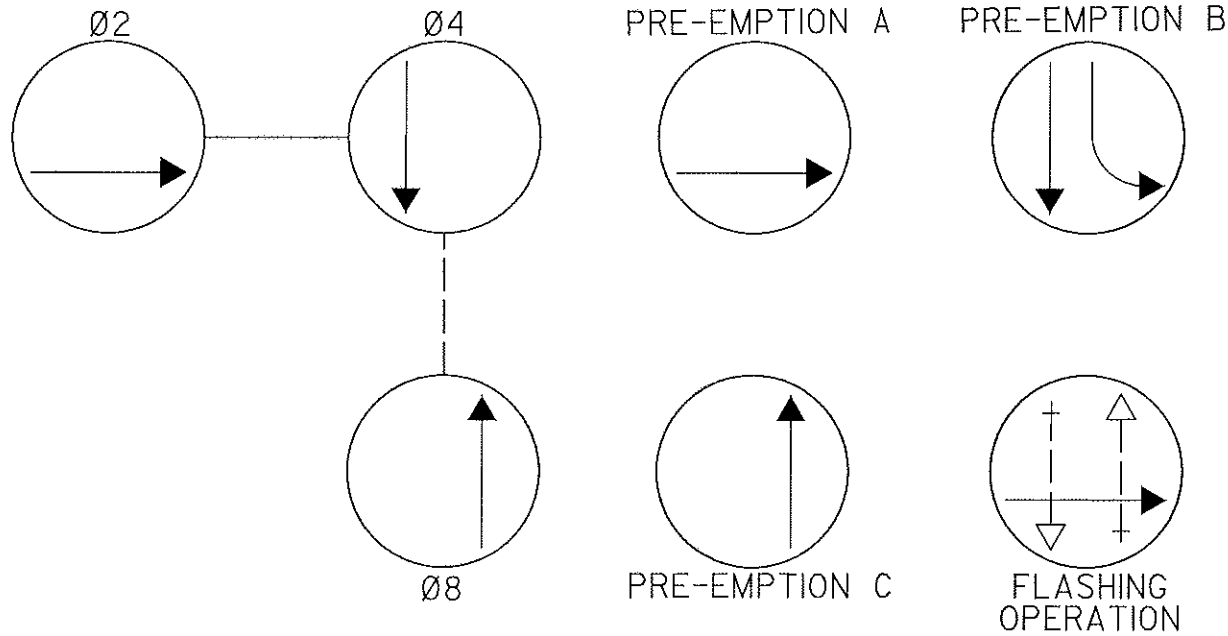
DATE: 05/30/97
 SCALE: 1" = 20'

F.A.P. NO. STPG-218-1(7)E
 S.H.A. NO. WA9535186
 CITY NO. 07-243-332

TS/ . NO.
3685

SHEET NO.
22 OF 66

NEMA PHASING



PHASING NOTES:
 1. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
 2. PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMETRY AND OPTICOM PRE-EMPTION MODULE

PHASING DIAGRAM

	1	2	3	4	5	6
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2	G	G	R	R	R	R
2 CHANGE	Y	Y	R	R	R	R
PHASE 4 & 8	R	R	G	G	G	G
4 & 8 CHANGE	R	R	Y	Y	Y	Y
PRE-EMPTION A	G	G	R	R	R	R
A CHANGE	Y	Y	R	R	R	R
PRE-EMPTION B	R	R	R	R	C C	G
B CHANGE	R	R	R	R	Y	Y
PRE-EMPTION C	R	R	G	G	R	R
C CHANGE	R	R	Y	Y	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

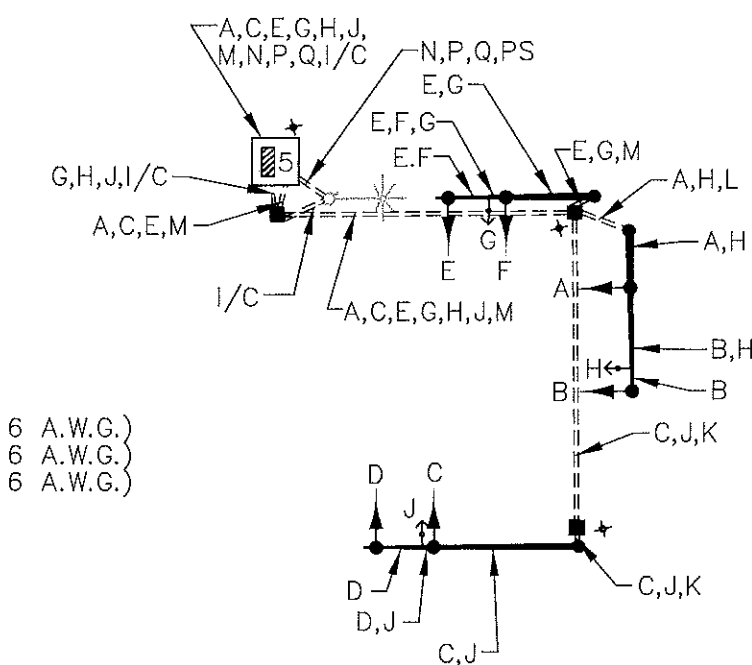
WEST SIDE AVENUE

U.S. 40 East
(Washington Ave.)

WIRING DIAGRAM

WIRING LEGEND

A - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
 B - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
 C - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
 D - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
 E - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
 F - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
 G - 3M OPTICOM DETECTOR CABLE, MODEL 138
 H - 3M OPTICOM DETECTOR CABLE, MODEL 138
 J - 3M OPTICOM DETECTOR CABLE, MODEL 138
 K - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
 L - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
 M - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
 N - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
 P - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
 Q - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
 R - 3/4"x10" GROUND ROD
 PS - PROPOSED ELECTRICAL SERVICE
 I/C - INTERCONNECT CABLE



INTERSECTION DESCRIPTION

I. GENERAL

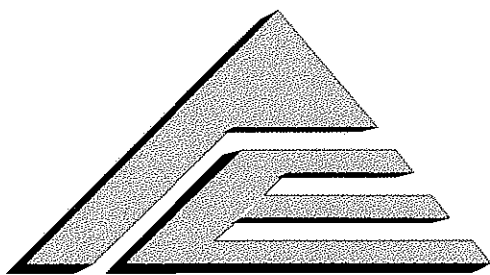
THIS INTERSECTION IS U.S. 40 EAST (WASHINGTON AVENUE) AND WEST SIDE AVENUE. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT U.S. 40 EAST (WASHINGTON AVENUE) RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA THREE (3) PHASE PRE-TIMED MODE. EASTBOUND U.S. 40 EAST (WASHINGTON AVENUE) AND WEST SIDE AVENUE WILL OPERATE IN SEPARATE PHASES. NORTHBOUND AND SOUTHBOUND WEST SIDE AVENUE WILL OPERATE CONCURRENTLY.

PRE-EMPTION ON EASTBOUND U.S. 40 EAST (WASHINGTON AVENUE) WILL CALL PRE-EMPTION A. PRE-EMPTION ON SOUTHBOUND WEST SIDE AVENUE WILL CALL PRE-EMPTION B. PRE-EMPTION ON NORTHBOUND WEST SIDE AVENUE WILL CALL PRE-EMPTION C.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE, AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.



A/E GROUP, INC.
 ENGINEERS • PLANNERS
 181 E. Main Street
 Westminster, Maryland 21158
 A/E Job No. 95-289

SIGNALS

1,2,
3,4,6 5
 (R) (R)
 (Y) (Y)
 (G) (G)
 12" (C)
 12"

→ → OPTICAL PRE-EMPTION
 DETECTOR EYE

SIGNS

7
West Side Ave
 D3-2
 Var. x 16"
 9,12
Washington Ave
 D3-2
 Var. x 16"
 8,10
 R6-1(R)
 36" x 12"
 11,13
 R6-1(L)
 36" x 12"

CONSTRUCTION DETAILS

- (A) INSTALL 21' STEEL POLE, 28' MAST ARM, SIGNAL HEADS, SIGN, OPTICOM DETECTOR, (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (B) INSTALL 21' STEEL POLE, 38' MAST ARM, SIGNAL HEADS, SIGNS, OPTICOM DETECTOR (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (D) INSTALL BASE-MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS; AND, 2-2", 90-DEGREE P.V.C. BENDS.)
- (E) INSTALL HANDHOLE.
- (F) INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).
- (G) INSTALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (K) INSTALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (M) REMOVE AND REPLACE EXISTING SIDEWALK.
- (P) INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND 2" WEATHERHEAD.
- (R) INSTALL 10' OF 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND COIL 25' OF ADDITIONAL CABLE.
- (S) REMOVE EXISTING SIGN AND SIGN POST.
- (T) REMOVE EXISTING STOP BAR.
- (U) INSTALL 24" SOLID WHITE LINE.
- (V) INSTALL GROUND MOUNTED SIGN.
- (W) REMOVE EXISTING CONTROLLER CABINET, PEDESTAL POLE, AND FOUNDATION.
- (X) REMOVE EXISTING STEEL POLE, MAST ARM, SIGNALS, SIGNS, AND FOUNDATION.
- (Y) CONSTRUCT SIDEWALK RAMP.

UTILITY LEGEND

— G — G — GAS MAIN
 — W — W — WATER MAIN
 — S — S — SEWER MAIN
 — — — — — STORM DRAIN
 — TV — TV — CABLE TELEVISION
 — E — E — ELECTRIC CABLES
 — T — T — TELEPHONE CABLES
 — A — A — AERIAL CABLES